

DIPTERA FROM THE LOWER RIO GRANDE OR
TAMAULIPAN FAUNA OF TEXAS—II.*

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TABANIDÆ.

Tabanus atratus F.

Two ♂♂. April 16, and July 11. Brownsville, Texas.

The eyes are slightly pubescent. First posterior cell completely closed, very short petiolate. Length, 20 to 22 mm.

SYRPHIDÆ.

Eupeodes volucris O. S.

One ♀. May 2. Brownsville, Texas. Taken on foliage.

Length, 7 mm. Has ground color of abdomen brown, instead of black. This record extends the range of this species very considerably. It is a characteristic species of the Plains, belonging distinctively to the *Upper Sonoran* subregion, and is one of those species which indicate the extension of the dilute *Upper Sonoran* to the Lower Rio Grande region. There is a certain element of *Upper Sonoran* present in the *Tamaulipan* fauna; and it is interesting to reflect that the dilute *Upper Sonoran* reaches to, and actually meets and mixes with the dilute *Neotropical* here on the Lower Rio Grande.

Baccha tropicalis Towns.

This species was described in Section I. It is most nearly allied to *B. notata* Loew of Cuba, a specimen of which from Florida has recently been identified by Mr. W. D. Hunter (with Dr. Williston's assistance). The Florida specimen, while stated to be a ♂ (Can. Ent. April, 1896, p. 97), possesses the peculiarities of wing coloration and abdominal markings distinctive of the ♀ of *tropicalis*. If it be a ♂, it is certainly a most aberrant one, judging from the usual sexual characters in this *Neotropical* group of *Baccha*.

NOTE.—While referring here to Mr. Hunter's papers, I wish to point out a few errors that he has made. In the Can. Ent. for April, 1896, p. 96, he states that up to that time there had been recorded only one specimen of *Baccha tarchetius* Walker, besides the type in the British Museum; and that that specimen was from New Jersey, collected by Mr. Keen, and is now in the National Museum. If he will refer to the Trans. Am. Ent. Soc. for March, 1895, p. 38, he will find

* Section I of this paper appeared in JOURN. N. Y. ENT. SOC. 1897.

that I recorded the species there from the District of Columbia, in a ♂ which I collected August 19. On page 101 of the same paper, Mr. Hunter says that, with the exception of Kansas records, *Spilomyia quadrifasciata* Say had not been recorded "outside of some of the extreme eastern States." I have recorded it from Michigan, in my paper above referred to. The fact that, throughout his paper, he repeatedly quotes Snow's records of species from Colorado and New Mexico, and entirely ignores my previous records of the same species of Colorado, New Mexico and Arizona, indicates that my paper was not seen by him. The drawing of broad statements as to distribution, without consulting the literature bearing on the subject gives rise to wrong impressions and can not be too strongly condemned; especially when it is remembered that my paper was a long and important contribution, on Syrphidæ particularly as well as other diptera, and appeared fully a year before, and in such a prominent medium as the Transactions of the American Entomological Society!

***Volucella tamaulipana*, sp. nov.**

♂ ♀. Length, $5\frac{1}{2}$ to $8\frac{1}{2}$ mm., both sexes ranging through these sizes.

The ♀ in life is easily distinguished by having a lighter or more yellowish abdomen and scutellum than ♂. This is not by any means apparent in dried specimens. Front and face light yellow, face much produced downward to a blunt point; face and front white-pilose, vertex with black hair, cheeks with heavy shining black or brown stripes; facial stripe much less distinct, fuscous, brown at oval margin. Face very gently concave above the slight tubercle. Frontal vitta moderately broad, shining brown, lighter anteriorly. Frontal triangle yellow, tinged with fuscous along middle, hairs somewhat brownish. Antennæ about half as long as face, reddish-yellow; third joint subequilateral, a little bulged on edges of basal portion, and slightly narrowed on apical portion; arista hardly as long as antennæ, thinly long hairy above, and more thickly short hairy below. Thorax greenish-black, thickly clothed with short yellow hair, with a patch of black hair on posterior central portion of disk next the yellow prescutellar spot, whole of scutellum and larger or smaller prescutellar spot bright yellow, the wide lateral margins of thorax same except a fuscous space immediately above base of wings. A yellow spot on pleuræ directly below humeri, and a fuscous pale area in front of wing bases. Hair of scutellum bright yellow on anterior half or less, abruptly black on posterior half. Some longer ^{yellow} weak bristles or hairs on edge of scutellum. Metanotum shining black, with an arcuate line of yellow next scutellum, and a fuscous area between. Disk of scutellum, viewed from above, appears broadly fuscous. Abdomen of a general yellowish brown; first segment blackish in middle, and black on narrow hind border; second segment wholly light yellow, except the sinuate hind margin blackish or brown, or with a median line of the brownish separating the elongate lateral yellow markings. Third segment with the same yellow markings quite distinct on anterior half of segment in some specimens, more or less distinctly divided by a median vitta,

in others very indistinct. When distinct these spots are usually evenly rounded on whole hinder border, and often reach to but little short of hind margin of segment. Fourth segment usually yellow on anterior lateral portion, often indistinct in dried specimens. Pubescence of fourth segment wholly white; of third white on front margin, very narrowly on median line but covering about half the length of segment on sides; pubescence of second white on about anterior half, somewhat irregularly following the yellow markings. Rest of pubescence of abdomen black. Pubescence of venter white, except near apex. Legs yellowish-brown, the knees yellowish, the tarsi clear brownish-yellow except last two joints (and sometimes tip of next) black. Second vein strongly sinuous near extremity. Wings hyaline, narrowly tinged with yellow along whole costa; less than the oblique apical third yellowish fuscous, with brown cloud on section of second vein at extremity of marginal cell, and a subhyaline space before it. A lighter space in end of first posterior cell. Heavy clouds on anterior crossvein, the crossveins at tip of second basal cell, and the origin of third vein. Brown cloud of stigma connected with that of anterior crossvein by a fuscous patch. Clouds of origin of third vein and tip of second basal cell are also connected by fuscous. Fuscous of tip narrowly and irregularly extended along inner margin of wing. The proximal boundary of the apical fuscous of the wing extends approximately from the end of the dilute stigma obliquely across to the end of second posterior cell.

Eleven ♀s, and twenty-four ♂s, as follows: All the ♀s June 24, except one June 28: all the ♂s June 24, except two June 25, one June 28, and one July 3, near Brownsville, Texas. All on flowers of *Lippia lanceolata* Michx., except two ♂s (June 25) which were hovering in air under shade of a large tree in woods. Others were seen hovering in this manner and poised in the air, in company with them. *In copula* June 24.

This species belongs to the group of *V. pusilla*, *satur*, etc. The apical fuscous of the wing has the same inner boundary shown in the figure of *pusilla* given by Williston (Synopsis Syrph. pl. 6, fig. 3). It is one of the short, stout species, with the abdomen subround, and wider than the thorax.

CONOPIDÆ.

Zadion albonotatum Towns.

The species was described in Section I. It is on the order of *Z. splendens* Jaen., being practically, so far as effect goes, a melanistic and intensified color form of that species. It is, however, a perfectly good species, being quite distinct in its emphatic coloring.